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10/525,408	04/17/2006	Graham Alexander Munro Murdoch	61229-00003USPX	7500
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/525,408

Applicant(s)

MURDOCH ET AL.

Examiner

Nabil H. Syed

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11/20/06, 2/21/05.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 18 and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As of claim 18, the term "the second time is at least equal to the first time" is not properly defined in the specification.

As of claim 19, the term "the second time is at least equal to the reciprocal of the first probability multiplied by the first time" is not properly defined in the specification.

Applicant is advised that for the purpose of examination the claims are given their broadest reasonable interpretation.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 48 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 48, the phrase "may be" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

#### **Claim Rejections - 35 USC § 102**

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 1 and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Heinrich et al. (5,606,323).

As of claim 1 and 44, Heinrich discloses an identification device for receiving a first signal and transmitting a second signal (via a transponder 11; see fig. 2), and an system for identifying articles (see fig. 1; also see col. 1, lines 11-14), the device including:

a receiving means for receiving the first signal and employing the first signal to generate

a voltage (via transponder 11 comprising an antenna (10) to receive the RF signal from the base station and a power rectifier (12) circuit to rectify the current for generating the power for the tag circuitry; see fig. 2; also see col. 1, lines 18-24) ;

wherein the receiving means generates a first current from the voltage; (via the antenna generating a first current; see col. 3, lines 60-64) ;

an integrated circuit, wherein the integrated circuit includes a state selection means for selecting whether the device is in a first state or a second state (via logic and memory circuits (14) and a switch (24) working together to change the state of the tag from first state to second state (see col. 4, lines 62 through col. 5, line 5);

a connection between the receiving means and the integrated circuit (via connection (29); see fig. 2) ;

a transmission means for generating the second signal (via antenna 10 transmitting the data back to the base station; see col. 3, lines 24-27);

wherein - relative to the second state - a relatively larger amount of the first current flows through the receiving means when the device is in the first state (via transponder 11 generating higher current while in the first state; see col. 3, lines 56 through col. 4, lines 8); and

wherein - relative to the first state - a relatively smaller amount of the first current flows through the receiving means when the device is in the second state (via transponder 11 generating lower current while in the second state; see col. 4, lines 8-16).

Heinrich further discloses that a base station generates a first signal to plurality of transponders (see fig. 1; also see 17-34; also see col. 1, lines 5-8).

**Claim Rejections - 35 USC § 103**

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-27, 33-36, 39-46, 54-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinrich et al. (5,606,323) in view of Kubler et al. (6,525,648).

As of claims 2 and 54, Heinrich discloses all the limitations of the claimed invention as mentioned in claim 1 above but fails to explicitly disclose that a first and second probability is associated with the first and second state respectively and the first probability is lower than the second probability.

Kubler discloses a RFID system wherein a remote system 106 (an identification device) has a zero power state (second state) and operational state (first state) wherein the probability of operational state is lower than the zero power state (see col. 7, lines 59-62).

From the teaching of Kubler it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the transponder of Heinrich to include the function of associating the probability with the states as taught by Kubler in order to conserve power, such that for substantial periods of time no power is drawn from the limited power-capacity of the remote power supply (see col. 3, lines 50-55).

As of claims 3-6, 55 and 56, Kubler discloses that the remote data device 106 is in the zero power state (second state) about 23 hours and 59 minutes and in the operational state (first state) about 1 minute a day hence the first probability is at least two, four, eight and sixteen times lower than the second probability (see col. 7, line 66 through col. 8, line 2).

As of claims 7-16, Kubler discloses that the smaller current is three microAmp and the larger current is 80 miliAmp hence the smaller amount of current is less than approximately 100, 50, 30, 15, .1 and 4.99 and further smaller current is less than 50, 25, 5 and 1 percent of larger current (see col. 9, lines 66 through col. 10, lines 3 and col. 11, lines 56-60).

As of claim 17, Kubler discloses that the remote device 106 changes its state after receiving the signal from the base station and the timing of the RFID signals transmitted by the base station can be controlled by a system administrator so the probability of the second and first state are at least partially random because system administrator can transmit the data whenever data transfer is needed (see col. 8, lines 38-52).

As of claims 18 and 19, Kubler discloses that the remote device 106, stays in one state at a time and remote device has an operating cycle during which the device performs the data transfer and then go back to the zero power state (see fig. 8; also see col. 12, lines 62 through col. 13, lines 6 and col. 13, lines 31-35).

As of claims 20-23, Heinrich discloses that the receiving means is an antenna and the antenna can be coil, a dipole antenna, and a capacitive antenna (via antenna 10; see col. 3, lines 40-47).

As of claim 24, Heinrich discloses that the first signal is at least a radio frequency signal (see col. 1, lines 18-22).

As of claims 25-27, Heinrich discloses that the connection includes a voltage multiplier or a voltage rectifier or a series regulator for controlling the voltage (via a rectifier or a voltage doubling circuit; see col. 4, lines 52-61; also see fig. 3).

As of claims 33 and 34, Kubler discloses that the remote device 106 changes the state when a signal is received from the base station and further base station can transmit a unique signal (signal breaks) to identify only the remote device that is desired (see col. 9, lines 20-25).

As of claims 35, 36, 45 and 46, Heinrich discloses that the transponder includes a memory (via logic and memory circuit 14; see fig. 2; also see col. 4, lines 62-66) and the memory of the tag includes at least one of content information, address information and name information (see col. 1, lines 52-57).

As of claim 39, Heinrich discloses that a transponder can include an onboard power source (via an active tag comprising a battery; see col. 1, lines 39-43).



As of claim 40-42, Heinrich discloses that a single antenna can be used to transmit or receive the signal from the base stations or two antennas, one to transmit and other to receive, can be used in a transponder (see col. 3, lines 39-45).

As of claim 43, Heinrich discloses that the state selection means includes a MOSFET transistor (see fig. 4; also see col. 5, lines 1-5).

As of claims 57-60, Heinrich discloses that state selection means is comprised of a plurality of digital circuits (via logic and memory circuits and switch 24; see fig. 2) and digital circuit is a controller comprising of logic arrays (via logic and memory circuits controlling the circuitry of the transponder; see col. 5, lines 24-26). Even though not explicitly said but since the logic and memory 14 is controlling the circuitry of the transponder 11, it has control the logic arrays of the tag.

9. Claims 28-32, 37, 38, 47- 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinrich et al. (5,606,323) in view of Kubler (6,525,648) as applied to claim 2 above, and further in view of Tuttle (5,970,398).

As of claims 28-32, 37 and 38 the combination of Heinrich and Kubler discloses all the limitations of the claimed invention as mentioned in claim 2 above, but fails to explicitly disclose that identification device include an impedance means in series with the receiving means.

Tuttle discloses an antenna circuit configured for use in a radio frequency data communication device 14 constructed as an integral component of an identification postage stamp 24 wherein the postage stamp is formed from a thin sheet having a thickness of about .005 inches, and width and height of about 1.25 inches (see abstract;

also see fig. 1). A Schottky diode (impedance means; fig. 3) is electrically coupled in serial relation with the antenna 18 of the communication device (see col. 6, lines 1-6). Tuttle further discloses that the receiver sensitivity of the transponder device 14 is adjusted by matching or mismatching the impedance of the antenna 18 with respect to a circuit element that has current adjustable impedance (see col. 5, lines 33-41). Tuttle also discloses that a large resistor 57 can also be included in the diode circuitry (see fig. 7; also see col. 8, lines 24-40).

From the teaching of Tuttle it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Heinrich and Kubler to include an impedance means in series with the antenna as taught by Tuttle in order to tuned and detuned the receiver sensitivity of the antenna to further extend the life of battery in the identification device (see col. 5, lines 13-20)

As of claims 47-53, Heinrich, Kubler and Tuttle disclose that the articles that have a tag embedded in their body are sorted by the information stored in the tag, and further articles could be documents, parcels, postage stamps and baggage. Tuttle discloses that the receiving sensitivity and transmitting sensitivity of the antenna can be adjusted in order to achieve the desired signal sensitivity (see Kubler, col. 1, lines 26-67; also see Heinrich col. 1, lines 11-66; Tuttle col. 4, lines 42-45 and col. 5, lines 33-47).

### **Conclusion**

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nabil H. Syed whose telephone number is 571-270-3028. The examiner can normally be reached on M-F 7:30-5:00 alt Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman can be reached on (571)272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

N.S

Nabil H Syed  
Examiner  
Art Unit 2612



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